

Abstract of the Disclosure

THERMOPLASTIC ELASTOMER COMPOSITION

5 The present invention relates to a soft thermoplastic elastomer composition that is free of thermoplastic resin that can be utilized in manufacturing shoe sole inserts, seals, gaskets, wheels, and that can be overmolded on a hard substrate, such as a metal or a thermoplastic resin, for grips or handles on various household items. The present invention more specifically discloses a thermoplastic elastomer composition that is made
10 by a process comprising: (1) mixing (A) a block copolymer comprising a first polymeric block that is comprised of repeat units that are derived from a vinyl aromatic monomer and a second block that is comprised of repeat units that are derived from a conjugated diolefin monomer, wherein the repeat units in the second block are hydrogenated, and wherein the repeat units in the second block are elastomeric in nature, (B) a crosslinkable
15 elastomer, and (C) an oil, to produce an un-crosslinked three component blend; and (2) dynamically crosslinking the crosslinkable elastomer in the un-crosslinked three component blend during a thermo-mechanical mixing step; wherein the thermoplastic elastomer composition is void of thermoplastic resins.